

Attorney Docket No.: 1243.LUKP:125US
Application No. 10/711,848
Amendment Date: June 12, 2007
Reply to Office Action of March 12, 2007

Amendments to the Drawings:

The attached sheet of drawings includes changes to Figures 1 and 2. This sheet, which includes Figures 1 and 2, replaces the sheet submitted with the previous reply to office action dated December 12, 2006. In Figure 1, previously omitted references have been added, while in Figure 2, a further embodiment of the instant invention is shown and described.

Attachment: Replacement Sheet

Remarks:

Amendments to the Specification

Amendments to the specification have been made in view of the amendments to the drawings. Specifically, paragraph [0020], [0021] and [0021.1] have been amended. Applicants respectfully submit that no new matter has been added by these amendments.

Amendments to the Drawings

The drawings have been amended to include a block diagram of an embodiment of a gearbox actuation system in Figure 2. Figure 1 has been amended to include gap 25 which is formed by openings 18, 20, and 22. Applicants respectfully submit that no new matter has been introduced by these amendments.

The Objections to the Specification

The amendments filed December 12, 2006 were objected to under 35 U.S.C. 132(a). In particular, the Examiner has asserted that newly added Figure 2 and paragraph [0020] were not supported by the original disclosure. Applicants have amended Figure 2, thereby rendering the objection to Figure 2 moot. Applicants respectfully request reconsideration and withdrawal of the objection to Figure 2.

The Examiner has objected to “gearshift jaws of each gearshift rail (12, 14, and 16) form a gap” as being unsupported by the original disclosure. Applicants have amended paragraph [0020] to recite “the gearshift jaws of gearshift rails 12, 14 and 16 form gap 25”. Applicants have further amended paragraph [0020] to recite openings 18, 20, and 22 as being formed by “gearshift jaws 13a and 13b of gearshift rail 12, gearshift jaws 15a and 15b of gearshift rail 14, and gearshift jaws 17a and 17b of gearshift rail 16,” respectively. The amendments to paragraph [0020] are supported by the original disclosure which read “the gearshift jaws of gearshift rails form a gap” since openings 18, 20, and 22 are formed by the respective gearshift jaws, as clearly shown in Figure 1, and in combination form a gap as described in the original disclosure.

The Examiner objected to “first and second gears may be associated with rail 12, third and fourth gears may be associated with rail 14, while fifth and reverse may be associated with 16” as being unsupported by the original disclosure. Applicants respectfully submit that in

original Figure 1, as filed, each shift rail contained a pair of numbers or a number and letter selected from numbers 1-5 and R, directly corresponding to the transmission gear which each shift rail engages. Further, one of ordinary skill in the art of transmission design would recognize that the numbers 1-5 and R, as laid out in original Figure 1, indicate the respective forward travel transmission gears and reverse gear of a five speed transmission. In addition, Applicants submit that associating gears 1-2, 3-4, and 5-R, as set forth in paragraph [0020] is well-known in the art in view of U.S. Patent No. 4,912,997 to *Malcolm et al.*. Specifically, Applicants point to Figure 5 of *Malcolm et al.*, where gears 1-2, 3-4, and 5-R are each located on their own respective axis. *Malcolm et al.* disclose “a three-plane...gate shift pattern is defined...by three north-south shift slots identified as shift slots 1-2, 3-4, 5-R” (Col. 6, Lines 4-7). In view of the foregoing, Applicants respectfully submit that one of ordinary skill in the art would recognize originally filed Figure 1 as identifying first through fifth and reverse gears, and therefore the amendments to paragraph [0020] are supported by the original disclosure.

Hence, reconsideration and withdrawal of the objections to the specification and figures are appropriate and respectfully requested.

The Objection to the Drawings

Applicants have amended Figure 2 by removing engine 44 and relocating means for adjusting reference travel 46 between brushless electric motor 42 and automated gearbox 10. Applicants courteously submit that amended Figure 2 is supported by Claims 9 and 22 as originally filed. Claim 9 recites “a gearbox actuation system for selecting and shifting gears in an automated gearbox comprising a means for adjusting at least one reference travel,” while Claim 22, dependent from Claim 9, recites “at least one brushless electric motor for selection and/or shifting.” When read in combination, Claims 9 and 22 support amended Figure 2 whereby the brushless electric motor of Claim 22 selects and/or shifts Claim 9’s means for adjusting at least one reference travel which is a part of an automated gearbox. Applicants submit that amended Figure 2 is fully supported by the original disclosure. Applicants respectfully request reconsideration and withdrawal of this objection.

The Rejection of Claims 9-22 Under 35 U.S.C. § 112, First Paragraph

Claims 9-22 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Examiner has asserted that Claims 9-22 contain subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. More specifically, the Examiner has asserted that the recitation “an engine is in gear” is not understood as to what condition of the engine is meant by “engine is in gear.” Applicants have amended Claim 9 to remove the recitation of “when an engine is in gear,” thereby rendering this rejection moot. Accordingly, withdrawal of the rejection of Claims 9-22 under 35 U.S.C. § 112, first paragraph, is respectfully requested.

In view of the foregoing, and in view of the fact that Claims 10-22 have not been rejected over any cited references, Claims 10-22 are now in condition for allowance. Accordingly, such action is appropriate and respectfully requested.

The Rejection of Claim 9 Under 35 U.S.C. § 102(b)

Claim 9 was rejected under 35 U.S.C. § 102(b) as being anticipated by United States Patent No. 5,861,803 (*Issa*). Applicants respectfully traverse this rejection and request reconsideration for the following reasons.

Applicants courteously submit that *Issa* teaches a shift control system for manually shifting an electronically controlled automatic transmission; however, *Issa* fails to disclose a means or method for adjusting the shift control system. In particular, there is no disclosure to include means of adjusting the shift control system by means of a reference travel.

The Examiner stated in item number 11 of the instant office action that the claimed “at least one reference travel” is interpreted as “a gear speed ratio.” Again, Applicants courteously submit that *Issa* fails to disclose a means or method for adjusting the shift control system, and in particular fails to disclose an adjustment or correction of a reference travel. In fact, *Issa* merely mentions that “[m]anual transmissions generally include mechanical mechanisms for coupling rotating gears to produce different ratio outputs to drive the wheels[, while] [a]utomatic transmissions are designed to take automatic control of the frictional units, gear ratio selection and gear shifting”. (Col. 1, lines 29-34). Applicants courteously submit that aside from this

brief reference to gear ratios in the ‘BACKGROUND OF THE INVENTION’, *Issa* is silent regarding any further description of gear ratios. Therefore, Applicants courteously submit that one of ordinary skill in the art would clearly not conclude that *Issa*’s ‘gear speed ratio’ is ‘at least one reference travel’ as taught in Applicants’ disclosure. Furthermore, Applicants respectfully assert that *Issa*’s ‘gear speed ratio’ can not be ‘at least one reference travel’ since *Issa*’s ‘gear speed ratio’ is not adjusted or corrected to a reference value/position as taught in the instant application.

Moreover, a reference travel, as set forth in paragraph [0021] of the instant application, is defined as the movement of shift finger 24 within the gearbox actuation system and not a difference between gear speed ratios. Gear speed ratios merely create different proportional output speeds that can be achieved from the same input speed, whereas the reference travel of the claimed invention is a space and distance used to calibrate the actuation system.

In addition, Applicants’ amended Paragraph [0021] defines referencing as “the reference travel of moving shift finger 24 within recess 30 according to second bi-directional arrow 32.” As pointed out by the Examiner, although limitations from the specification are not read into the claims, the claims are to be read in light of the specification. *In re Van Geuns*, 988 F.2d 1181, 26 U.S.P.Q.2d 1057 (Fed. Cir. 1993). The specification defines a reference travel as the movement of the shift finger 24 within gap 25 and recess 30. Therefore, the definition of a reference travel must be interpreted in the claims as it is defined in the specification, which is the movement of shift finger 24 within gap 25 and recess 30. Conversely, *Issa*’s “gear speed ratio” is not movement of a shift finger within a gap and/or a recess.

Applicants’ amended Claim 9 recites “A gearbox actuation system for selecting and shifting gears in an automated gearbox of a vehicle comprising: means for adjusting at least one reference travel.” Since Applicants’ amended Claim 9 specifically recites a gearbox actuation system within an automated gearbox, the claimed gearbox actuation system is a separate and distinct component of the automated gearbox. In addition, the gearbox actuation system, as claimed, comprises the “means for adjusting at least one reference travel.” Therefore, the gear ratios of the automated gearbox are outside of, *i.e.*, separate and distinct from, the gearbox actuation system. Assuming *arguendo* that the “at least one reference travel” is “a gear speed

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ratio”, which it is not, the gear speed ratio of *Issa* is located outside of the gearbox actuation system in the form of transmission shafts that form the ratio.

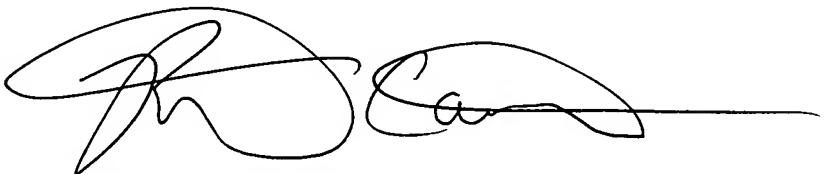
“A claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described in a single prior art reference.” *Vandergaal Bros. v. Union Oil of California*, 814 F.2d 628, 631; 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). MPEP §2131 (Emphasis added). Since the “gear speed ratio” of *Issa* is located outside of the gearbox actuation system, *Issa*’s invention does not comprise “means for adjusting at least one reference travel” within a gearbox actuation system, as set forth in Applicants’ amended Claim 9.

Accordingly, withdrawal of the rejection of Claim 9 under 35 U.S.C. § 102(b) is appropriate and respectfully requested.

Conclusion

For all the reasons outlined above, Applicants respectfully submit that the claims are patentable over the cited reference and in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully submitted,



Robert C. Atkinson
Registration No. 57,584
Attorney for Applicants
CUSTOMER NO. 24041
Simpson & Simpson, PLLC
5555 Main Street
Williamsville, NY 14221-5406
Telephone No. 716-626-1564
Facsimile No. 716-626-0366

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APPENDIX